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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,506	09/28/2004	Yoshio Okamoto	3400.P1414US	4041

23474 7590 07/12/2007

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EXAMINER	
THERKORN, ERNEST G	

ART UNIT	PAPER NUMBER
1723	

MAIL DATE	DELIVERY MODE
07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/509,506	OKAMOTO ET AL.	
	Examiner	Art Unit	
	Ernest G. Therkorn	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *June 15, 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *4-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 9, 10, 12, 13, 15, and 16 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034. PTO Translation No. 06-3034 will serve as a translation for Japan Patent No. 4-202141. The claims are considered to read on either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034. However, if a difference exists between the claims and either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034, it would reside in optimizing the elements of either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034. It would have been obvious to optimize the elements of either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 to enhance separation.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in view of Murakami (E.P. No. 656,333). At best, the claim differs from either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in reciting the polysaccharide derivative has a polymerizable group at position 6. Murakami (E.P. No. 656,333) (page 3, lines 22-24) discloses the 6-position is a desirable location to link polysaccharides. It would have been obvious to have a polysaccharide derivative with a polymerizable group at position 6 in either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in view of Murakami (E.P. No. 656,333) because Murakami (E.P. No. 656,333) (page 3, lines 22-24) discloses the 6-position is a desirable location to link polysaccharides.

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in view of Oda (U.S. Patent No. 6,117,325). At best, the claims differ from either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in reciting use of cellulose phenylcarbamate. Oda (U.S. Patent No. 6,117,325) (column 1, lines 36-39) discloses that cellulose phenylcarbamate is commercialized and widely used because of its high optical resolving powers. It would have been obvious to use cellulose phenylcarbamate in either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 in view of Oda (U.S. Patent No. 6,117,325) because Oda

(U.S. Patent No. 6,117,325) (column 1, lines 36-39) discloses that cellulose phenylcarbamate is commercialized and widely used because of its high optical resolving powers.

The remarks urge patentability based upon the number of polymerizable unsaturated groups relative to the number of the hydroxyl groups of the polysaccharide. However, Kimata (U.S. Patent No. 5,302,633) (column 3, lines 24-37) and the PTO Translation No. 06-3034 in the paragraph bridging pages 4 and 5 disclose that all the hydroxyl groups need not be completely modified with vinyl compounds. The modification need only take place to the extent that the chemically modified polysaccharide can be dissolved in a good solvent. As such, use of 5 to 50% unsaturated groups would be within the scope of a person of ordinary skill in the art to achieve.

The remarks urge patentability based upon the immobilization rate of polysaccharide being of at least 80%. Inasmuch as the recited process steps and the process steps of both Kimata (U.S. Patent No. 5,302,633) and Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 are the same, the immobilization rate would appear to be the same.

The remarks urge that Kimata (U.S. Patent No. 5,302,633) does not show the use of monomers. However, Kimata (U.S. Patent No. 5,302,633) on column 5, lines 43-53 discloses use of monomers.

The remarks urge that Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034 does not show the use of monomers. However, the PTO Translation No.

06-3034 on page 7, the last sentence of the second paragraph discloses use of monomers.

The remarks urge patentability based upon modifying the support. However, Kimata (U.S. Patent No. 5,302,633) (column 3, lines 48-52) and the PTO Translation No. 06-3034 in the second full paragraph of page 5 disclose modifying the support.

The remarks urge patentability based upon unexpected results. However, the comparison has not been made with the closest prior art, i.e., either Kimata (U.S. Patent No. 5,302,633) or Japan Patent No. 4-202141 in view of PTO Translation No. 06-3034. As such, the comparison is not considered to be pertinent.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ernest G. Therkorn

Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
July 10, 2007